



ICEOTOPE™



## Iceotope Solution for HPC

High Performance Computing (HPC) is the ability to focus significant compute resources quickly and efficiently at a particular, sometimes transient, level. It ranges from modeling our universe to understanding the behaviour of nanoparticles. The challenge is to marshal sufficient compute and associated cooling infrastructure to deliver a completed project within ever decreasing timescales and shrinking budgets. Most organisations are seeking increased density to try and achieve economies of scale in space and cooling. There is an alternative.

Designed whilst working closely with the University of Leeds, the Iceotope Solution provides significant amounts of industry standard processing power, memory, storage and interconnect required by HPC environments. However, unlike many systems on the market today, our solution is closely coupled with 2N coolant and power to the cabinet, so it complies with Tier 3 and Tier 4 designs. Iceotope typically reduces the energy directly consumed by the IT load by 20% and ancillary cooling by 97%. It takes roughly 80 watts to harvest the heat from a single 20 kW cabinet, equivalent to 30Kw of legacy IT, while enabling improvements in reliability and performance.

Available to purchase as two components, the Iceotope Solution is comprised of the Iceotope Platform and Iceotope Module. The 2N 47U cabinet can contain up to 48 of our "liquid cooled" compute modules that are currently powered by Supermicro using AMD Opteron, Intel E5 CPU's and the new generation of GPU's from AMD. Each module can be specified with a full range of memory, storage and network options and include the latest 10 GbE / 40 Gb Infiniband. Each Module will contain two CPU's, up to 256 GB of memory and up to 600 GB of SSD. PCIe3 is available to interconnect GPU and CPU modules.

Silent in operation, the Iceotope System does not need CRAC units, chillers, humidity control or air filtration so it can be located anywhere with access to power. This unique patented design isolates the system from facilities enabling a wide variety of heat recovery, passive or dry cooling options to be utilised. The Iceotope Solution brings significant capital and operational benefits to IT, reduced consumption and predictability to the energy managers as well as space and infrastructure savings to facilities. Everyone wins!



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## Inside the Iceotope Solution

